cont.

42, 44. Either of the multi-layer contact shown in Figures 1 and 4 may be used with an ohmic contact layer 45,48, a reflector layer 47,50, and a barrier layer (for the alternative embodiment) 46, 49.

In accordance with 37 CFR 1.121(b)(1)(iii), Attachment B contains marked up versions of the replacement paragraphs illustrating the newly introduced changes in the specification.

IN THE CLAIMS

The following is a clean version of the entire set of pending claims. In accordance with 37 CFR 1.121 (c)(1)(ii), Attachment C provides marked up versions of the claims containing the newly introduced changes.

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1. (Amended) A light-emitting device comprising:

a heterostructure of semiconductor materials having to at least one p-type and one n-type layer; and

a p and an n contact, the p contact electrically connected to the p-type layer, the n contact electrically connected to the n-type layer, wherein one of the p and n contacts is a multi-layer contact having at least one ohmic contact layer and one reflector layer.

- 2. A device, as defined in claim 1, wherein the multi-layer contact has a reflectivity greater than 75%.
- 3. A device, as defined in claim 1, wherein the multi-layer contact has a specific contact resistance less than $10^{-2}\Omega$ -cm².

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- 4. A device, as defined in claim 1, the multi-layer contact further comprising a barrier layer interposing the ohmic contact layer and the reflector layer.
- 5. A device, as defined in claim 1, wherein the reflector layer has a thickness greater than 500Å.
- 6. A device, as defined in claim 1, wherein the ohmic contact layer has a thickness less than 200 Å.
- 7. A device, as defined in claim 1, wherein the reflector layer is selected from a group that includes A1, Cu, Rh, Pd, and Au.
- 8. (Amended) A device, as defined in claim 1, wherein the p and n contacts are on opposing faces of the heterostructure.
 - 9. A device, as/defined in claim 8, wherein the ohmic contact layer includes Ni and g.
 - 10. A device, as defined in claim 8, wherein the reflector layer is Ag.
- 11. (Amended) A light-emitting semiconductor device comprising a GaN-based heterostructure having at least one p-type and one n-type layer; and
- a p and an n contact, the p contact electrically connected to the p-type layer, the n contact electrically connected to the n-type layer, wherein one of the p and n contacts is a multi-layer contact having at least one ohmic contact layer and one reflector layer.
- 12. A device, as defined in claim 11, wherein the multi-layer contact has a reflectivity greater than 75%.

cont. Ag.

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- 13. A device, as defined in claim 11, wherein the multi-layer contact has a specific contact resistance less than $10^{-2}\Omega$ -cm².
- 14. A device, as defined in claim 1/1, the multi-layer contact further comprising a barrier layer interposing the ohmic contact layer and the reflector layer.
- 15. A device, as defined in claim 11, wherein the reflector layer having a thickness greater than 500Å.
- 16. A device, as defined in claim 11, wherein the ohmic contact layer having a thickness less than 200 Å
- 17. A device, as defined in claim 11, the reflector layer being selected from a group that includes A1, Cn, Rh, Pd, and Au.
- 18. A device, as defined in claim 11, wherein the ohmic contact layer is selected from a group that consists of Ti Au/NiO, and Ni/Au.

REMARKS

Claims 1-18 are pending in the above-identified application. The following objections and rejections are respectfully traversed in light of the following remarks, and reconsideration is requested.

Several amendments were made to the specification. On page 9, line 3, "contact" was changed to "ohmic" for clarity. This ohmic layer is also known as an ohmic contact layer.

The use of reference character "41" to designate the substrate on page 10, lines 5 & 13 is appropriate. On page 10, lines 5 & 13, reference character "41" is identified as a substrate.

On page 10, line13, in a reference to a possible embodiment of Figure 6, substrate 41 is merely identified as possibly being a sapphire substrate. The use of reference character "41" reference character "41" Serial No. 09/469,652

cont.

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